

The present invention concerns a procedure for the manufacture of plant lipoxygenases with altered positional specificity as well as the lipoxygenase obtained through the procedure and its use for the hydroperoxylation of substrates. In particular the LOXs according to the invention permit for the first time the manufacture of new γ -linolenic acid derivatives in large quantity. For this γ -linolenic acid as substrate is incubated under suitable conditions with the LOXs according to the invention. Depending on the mutant LOXs put into use a hydroperoxylation of the γ -linolenic acid then ensues, preferably at position 6 or position 9 or positions 6 and 9.

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